POLYMORPHISMS IN THE IL4Rα GENE   (Accession No. AC004525)

```
TGTGAGCTAC TGTGTCTGGC CTGAATAATA AAATTTAAAA CAATTTTTCA
AAAATTCACC ATGAGGTCTC ACTATATTCC CTAGGCTGGT CTCAAACCCC        30100
TGGACTCCAA GTGATCCACC CCACCTTCCC GAGTAGCTGG GACTAGAGAT
GCACACCATT GCACCCAATA GAGCAATACG TTTCTGTTCT TTGTAAATTA        30200
CCTGCTCTAA GGTATTTTTG TTATAGCAGC CTATATGGAC TAAGCTGACT
TGTAACGTTA CTTGAGACTT TAAAGTGTTC CGGTCACTGT TGGAGGGCTC        30300
TGTCTGTGTT AGCTCATTTA ATCCCCACAA CACCTCAATC AGATGGGGCT
ATTCTTAGTC CCACTTTATA GATAAGGAAA CTGAGGCATG GAAGCACAGC        30400
TTGCTCAAGG TTCACATCTA GTCAGTGACA GAGCAGGTAT TTAAACCTCA
GGAAATAATC AGAGAAACAT GTGTAGAGGG TTGTCCAAGG AAGGCCACAT        30500
CCAGAAGCAT CTCCCAGGAC AGTTGTTGTG TAGCTCACCC TCTGGACTTT
GTGGGTCTGG GTGTTGTTTC ATGATTATAG AGAGAGCTCT GTGAACGTGG        30600
AGGACCTGTT GTCGGCAGAG ACACAAATGG CCAGGGCATG GCTGGGCAGC
CGCAGTGGCT CAGGCCTGTA ATCCCAGCAC TTCGAGAAGA CCAGAGGGGC        30700
AGATCATGAG GTCAGAAGTT CAAGACCAGC CTGGCCAACA TGGTGAAACC
CCGTCTCTAC TAAAAATACA AAAATTAGCC AGGTGTGGTG GTGGGCACCT        30800
GTAATCCCAG CTACTCGGGA GGCTGAGGCA GAAGAATCGC TTGAACCCGG
GAGGTGGAGG TTGCAGTGAG CTGAGATTGC ACCACTGCAC TCCAGCCTTG        30900
                                   G
GAGACAGAGC GAGACTCTGT CTCGGAAAAA CAAACAAACA AGCAAACAAA
CAAACAAATA AATGGCCAGG GCAGGGGAGG GTTGCATATT GAATAAGATG        31000
AGCTCTGCTG GAAGCACAGG TCAGCACTAA CCTGCTTCCT CTCTCTCTGC
AGGTGCCTTG GCATCTCCCA ATGGGGTGGC TTTGCTCTGG GCTCCTGTTC        31100
        [exon 3: 31071..
CCTGTGAGCT GCCTGGTCCT GCTGCAGGTG GCAAGCTCTG GTAAGTCACC
                ..31140]
ACTTCTCAAT CATTCATTTG TTGGCTATTA ATGGCGTGCC AGGGTCCTGC        31200
AGTATGTCAC CTGGCCTTAT GGAGATTACA CTGCAGTGGG AGGGGACAGC
CAATGACAAG TGGCCCTGAT TATCAGTAAA TTCTAAAGAT TGTTAGAAAG        31300
TGATGGGAGC CGGGTGCAGT GGCTCACACC TGTAATCCCA GCACTTCAGG
AGGCCGAGGC AGGAGGATCG CTTGAGCCCA GGAGTTCGAG GTCAGCTTGG        31400
GCAACATAGG GAGACCTTGT CTCTACAAAT AATAAAATAT TAGCCAGGTG
TGGCAGTGCA CGCCTGTAGC CCCAGCTACT CAGGAGGCCG AGGTGGGAGG        31500
ATCCCTTGAA CTCAGGAGGT CAAGGCTGCA GTGAACTGTG ATCGCGCCAC
TCCACTCCAG CCTGCGTGAG AAAGTGAGAC CCTGTCAAAA AAAAAGAGAA        31600
GGTGATGGGG AAAGAACACA GAACAGCATA AGAGGGGGTT GGGGAAGCTG
GGTGGAGTGG GGGGGATTGC AGTTGAAAGT AGGGAAGTCA GGGAAGGCCT        31700
CATTGAGCTG ACTTGGAGGA AGCGGGAACC GTGCAGATGT CTGGGGAAGG
CTCATTCTTG GCAGAGAGGC CCTGCACTGA GCCTGGCGGG AGGGTTGAGC        31800
ACAGGAGGGA ATGTGGTGGA GGAGAGTGAG CAGCAGGAGG GAGCAGTGAA
GGTCAGCAAG GTGACAGAGT GGCTGAATCA AAAAAGACCT TGCAGTGTTT        31900
GAGCAGAGGA TCCATATCAT CCATTATGTT CCAAAGGACT CTTCAGGATG
CCGTGTGGAG AAAGGAAGAG GGTGGAAGCC AGGAGGTCTG GAGGGAGGTC        32000
TGGAGTGGAG GAGATGAGAG GCTCCGGATC CCTCTGGGAG GTAGATTTGA
GGACAGATTG GAATTGAGGT GAAAGACAGA GAAAGAGAAG TGGCCAGGAT        32100
GACTCCAAGA TTTCTGACCT AAACTACTGG GAAGGACGCG GTTGTCATTT
CTGAAATGCA GAAGGATGCC AGAAGAGAAG GTACTTTGGG GAGGGGCGGG        32200
AATCAGGAGT TAGTTTTGGA CATGAGATAA GCTTGGAATA TTTATTTGCT
ATCTAAGACA GCTCCTTAAC ATGGTAAGCC CTTATGCAAG TTGTTGTCAG        32300
CTGAGATGGG CGTGGCACTG AGCATGGGAG CATGGAGGCG CCTGAGTGGT
CTCATGCTCA GGTGGTTTAG CAAACTCAGT GTACATCCTG CCAATTCCAG        32400
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FIGURE 1A

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TCCTGCCATG GCCACTGACA AGCTAGGAGG GCGCTGAAAG GAGAAGGACC
CCGATGTCTC CTCCAGCCCA TCCATCTCCT CTCTCCCATT GGCCAAACCC        32500
AACCGGAAAC TAAAGGCCAA GGGTACCCGG TGATGAAGAC TGTGGTATCA
GCCTCCTGAG CACAGAGAGG GCAGAAGGG GTGGAGACAA AGAGGGGCGC        32600
AGATAGTGGG CAAATGGGGA AGTGGCACTT CCCCTAGCTC GAGGGCAGAG
GCTTGGTGTG ATGGAATGGC ACTCCTTAAA CTGCTACATA TTTTCCCTTT        32700
AATTTGGCCA AGAACAAGTT GTCAAGTTTG TGTGAGATAA AGGTGCACTT
GGTTCGTTCT TGTCTAATGG CCCCCGCACC CATGGGTATT TCTTCAGCTT        32800
CCACAGTCAT CCCGACACTA GCTGGGAAGC TCCAGCAGCC CTGGTCCTGG
CCCCAGCTCT GTGGGCGCTG GCCCTCAACT TTGCCTGCAC TGTGCTTTTG        32900
TGCTATTCCC CTTGGTCCTG TTTGGGTGCA AGTCCCCCTC ACGCATTGAG
   T
TTCCTGGGCC GCTCAGGCTG CTCCTGTGTC TCCCCAGGGA ACATGAAGGT        33000
           T    [exon 4: 32988..
CTTGCAGGAG CCCACCTGCG TCTCCGACTA CATGAGCATC TCTACTTGCG
AGTGGAAGAT GAATGGTCCC ACCAATTGCA GCACCGAGCT CCGCCTGTTG        33100
TACCAGCTGG TTTTTCTGCT CTCCGAGTAA GCCTGCGCTG GAGCTGGAGG
           ..33126]                C
TTTGGGGAGG TTGTGCCCAA AGGGTTTGCC CCAAGAGTGA GCTGGGTCCA        33200
GGTGGTGCGC TGGAGTGCAG GATGCTGAGT ATGGTTTGCT GCTGTTTATA
TGGTGTTAGA GGGGAGGTCC CATCTCCAGG GACATGTTAT GTAAGATACA        33300
GTGGAGCGCA TGGTGGGAGT GTTGGTCCAC GTGGCACATG GATACGGCTG
GAATACTGGA CTAGACCAGC AGTTCTCACA CTTTTTGGTC TCAGGACCCT        33400
TTTTCACACT TAAAAATGAG TGAGGACCCA AAGGGCTTTG GTGTAGGTAA
CACATCATTC TATGTTTACC TAATTAGAAC TTGCAATGAA GAAATGGTGT        33500
AATTTTTAAA AAATTAAAAC AATTAAAAAT TTTTTTTCTT ACTGAAATGG
AGGTCTCACT GTGTTGCCCA GGCTGCTCTC AAACTCCTGG GCTCCAGTGA        33600
TCCTCCTGCC TCCGCCTCCC AAAGTGCTGG GATTACAAGC GTGAGCCGCT
GTATCCGGCC CAAAATGGAG AAATTTTAAG TCCCAACAAC ATGCAAGCCC        33700
GCATTCAACA AATCTTCAGA TCAATTACAT GATCACAGGT CATGTAGCCT
CTAGAAAATT CCACTGTACG CCAGTGAGAG AGAGTGAAAA GGCAAATAAC        33800
GTCCTGTAT TATGATGAAA AGAGTTTTAC CTGGTGGGCC CAGACCACAC
TTTGAGAACC ACTGGACTAG ACCCTTGATT GAGGAGTACG GTGTTGAGAG        33900
TGGAGTCCTC TGTGATGGTG GATGGACCAG GACACATGGC ATAGGAGTCA
GGTGGTTCCC TGGGCTACTC CATGGTGCAC AGGATGCTTC GTTACACTGG        34000
TGCCCAGGAC ATAATCACGT ACACAAGACA CACAGTTACG GGGCAGACTG
GGGATATACG GCACACCAGC ATGCAGCGTT CACCAGTAAA GGTGGTATTC        34100
CATGATTATT CTAAGGTAGA TGGGCTGTGC TTTGTTTCCA TTGGCTTAGT
CCAGGGATTG GCAAACTATG GCCCGTGAGC CAAATCCGGC CCACTGCTTG        34200
TTTTTGTAAA TAAAGTTTTA TTGGAACACA CTGGCTGCTG TAGTTGTAAC
AGAAACTGCA TGGCCCTCCT TTATGTTTTT TGTTTGTTTG TTTGTTTGTT        34300
TGTTTTCTTT GAGACAGAGT TTCGCTCTTG TTGCCCAGGC TGGAGTGCAG
TGGCACAATC TCGGCTCACT GCAACCTCTG CCTCCCGGGT TCAAGCGATT        34400
CTCCTGTCTC AGCCTCCCGA GTAGTTGGGA TTAATGGTGC CTGCCACCAC
ACCCGGCTAA TTTTTCGTAT TTTTAGTAGA GACCGGTTTT CATCATGTTG        34500
GCCAAGCTGG TCTCGAACTC CTGAACTCAG GTGATCCACC CGCCTCAGCG
TCCCAAAGTG CTGGGATTAC AGGCATGAGC CACTGAGCCC GGCCTCCTCC        34600
TTTATCTTAA TTGAAATAAT TCAGAAATGG AAAGTCAAAT ACTGCATGTT
CTCACTTATA AGTAAGAGTT AAATAATGTG TACACATGGG CATTATTCCA        34700
TGTACCATGG AATAACAGAC ATTGAAGACT TGGGAGGGTG GGAGAGGGGT
GAAGGAAGAG AAGTTACTTA ATGGGCATAG TGTACACCAT TTGGGTGACG        34800
GACCCACCAG AACCCCAGAC TTCACCACTA GGCAGCATAT CCAGTGAGAA
CAGATCTGAG GCTTGCCATC AAAATTGCAC TTGTAAGGCC GGGCACTGTG        34900
GTGGCTCGCG GCTGTAATCC CAGCCCTTTG GGAGGCCGAG GTGGGCAGAT
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FIGURE 1B

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CACTTGAGGT  CAGGAGTTCG  AGACCGGCCT  GGCCAACATG  GTGAAGCTCC      35000
ATCTCTACTA  AAAATACAAC  AATTAACTGG  GTGTAGTGGC  GCACACCTGT
AATCCCAGCT  ACTAGGGAGG  CTGAGGCGGG  AGAATTGCTT  GAGCCCAGGA      35100
GGTGGAGGTT  GCAGTGAGCC  GAGATCACAT  CACTGTACTC  TAGCCTGGGT
GACAGTGAGA  CTTTGTCTCA  GGAAAAAAAA  ACAAAAACAA  AAAACAAAAA      35200
ACTCGTACCC  CCTAAATTTA  TACAAATAAC  CAAAAAAAAA  AAAAAAAAAG
GAAATTGTGT  GGCCTTTGAA  GTCCAAAATA  TTAACTATCT  GGCCTGTTAC      35300
AGAAAAGTT   TGCAGACCCC  TGGCCTAGCC  CGTGAGATGT  GGGTTGGCTG
TTAAGGTGGA  ACATTGGAAT  TATCTTACGA  TGGCCAAACT  GTGCGATGCA      35400
GAGCTTATGT  TGTTCTAAAT  TAATTAGTGC  CACCGGTTCT  TCCCTTTCAT
GGGCTTTCAG  GAACAAGCTA  AGTCCCAGGA  CCAGGGCCGG  CAGCTAGGCA      35500
GGTGTGAGGA  GCATCCTTGG  TGCATGTGGT  AAGAGGCTGT  GGCCAGCAAG
AGAGGCAACC  CTAGTCGGCT  GCCCCAGCAC  ACCCTGGCCG  CTCCCAAGCC      35600
CCCAGATCTG  TCCTCACATC  CGTGATCGGG  AAGCTGGAAG  AGTCTGATGC
GGTTCCTGGA  GGCATGTCCC  GGACACAGCT  GTGGGGCCCA  GCCAGCCTAC      35700
AGGTGACCAG  CCTAACCCAG  CCCCTGTGTC  TGCAGAGCCC  ACACGTGTAT
                                                        G

    [exon 5: 35736..
CCCTGAGAAC  AACGGAGGCG  CGGGGTGCGT  GTGCCACCTG  CTCATGGATG      35800
              T         A
ACGTGGTCAG  TGCGGATAAC  TATACACTGG  ACCTGTGGGC  TGGGCAGCAG
              C
CTGCTGTGGA  AGGGCTCCTT  CAAGCCCAGC  GAGCATGGTG  AGCAGGGCGG      35900
              ..35887]
AGTGCGGCAG  GGGTGGCTGG  GTGTGTTCCC  ACAGCTGCCT  GGGCTGAGGG
    T                                           T
TGGGGTGGGC  AGGGGAGGAG  GTGGGGTCAT  AGCAACAGCA  GGAGGAAGCC      36000
    A
GCCTGTATTT  TCCCAAATCT  GATGGGATTC  CTGCCCCTGC  CTGGGCCTCA
GTCCTCCCAC  CTTTGAAACG  GAGCTGGTCG  CAGTAGACCA  CCAAGCCCCC      36100
TTCAGCCCAG  CTGTTTCCAC  CCCTGAACTT  AAGTGCCCAG  GAAGGCGTAT
TGAGATGAGG  TGTGCTTGCT  GGAAGGCATG  CCTGCTGCTG  ATTGAAAACC      36200
GAACTGGGAA  CATTCCTTCC  ATTCTGTGTC  CACTGGTCAG  CTGCTGCGGC
TTTGGATGGT  CTTGACCGTG  GAAGGCTGAC  CTTCTTCTGG  TACCCGGAGT      36300
CCCTGCAGGA  ATCCCCCTTG  AGCTTGCTGG  GCTGTGGTGA  CAGGAGTTTA
AAACATGCGT  TGTATTCCAG  TGATGCATGA  TATGACATGC  ATCACAGGAA      36400
TAAAACCTG   AGGTCTCATG  GATATGATTG  CTTCAAAGGA  GACCAAGTTT
TAAAACAGAT  GAATCAAAAT  AAAGAAAAT   ACTCAGTAAA  TCATCATAAA      36500
GTACAGAGAT  GTGGCCAAAG  GTGTGAAGGA  TGCAGCTGTA  AAAGCTGAAG
TTTGAGGCCG  GGTGTGGTGG  TTCATGCCTA  TAATCCCAGC  ACTTTGGGAG      36600
GCCGAGCCCA  GCGGATCACC  GGAGGTCAGG  AGTTCGAGAC  CAGCCTGGAC
AACATGGTAA  AACCCCGTCT  CTACTAAAAA  TACAAAAAAT  TAGTCTGGCA      36700
TGGTGGCAGG  CGCCTGTAAT  CCCAGCTACT  TGGGAGGCTG  AGGTAGGAGA
ATGGCTTGAA  CCCAGGAGAA  GGAGGTTGCA  GTGAGCTTAG  ATCATGCTAC      36800
TGCCCTCCAG  CCTGGGCGAC  AGAGTGAGAT  TACGTCTCAA  AAAAATAAAA
ATAAATAAA   ATAAAAGAT   TTTTTAAAAG  GCTGAAGTTT  GGGTTACTTT      36900
GGCTCATACA  CTTTGCCTTC  ACTGTAGAAA  GGTGGTTAGT  AAAGACCAGG
CGCGGTGGCT  CATGCCTGGA  ATCCCAGCAC  TTTGGGAGCC  CAGCGCAGGC      37000
AGATCACTTG  AGCCCTGGGC  TATTGAGGCT  GCAGTGAGCT  GGGATTGTGC
CACTGCACTC  CAGCCTGGGC  AACAGAGTGG  GACCCTGTCT  CAAAAAAGAA      37100
GAAAAAAGG   GTAATTAATA  AACACTAAAG  TTCTATGTAG  AATTTTAGCA
ACATTATTGT  TATTATAATC  TTCTTTGCTA  TGGCTCTGAA  TCTGTGTGGT      37200
GCTCCAGAAG  TATGCTATGG  AGGTTTTGTC  GACCAAAAAT  CTGGGTGGTG
GCTGTGGTTT  GTAGGCCGGG  GCTGGGCTGG  GTGATGGGGG  AGTCACTGCA      37300
```

FIGURE 1C

```
TAGATCCTCA CATAGAGGCC GCTTCTCCCG CAGTGAAACC CAGGGCCCCA
                                A
        [exon 6: 37334..
GGAAACCTGA CAGTTCACAC CAATGTCTCC GACACTCTGC TGCTGACCTG        37400
GAGCAACCCG TATCCCCCTG ACAATTACCT GTATAATCAT CTCACCTATG
CAGTCAACAT TTGGAGTGAA AACGACCCGG CAGATGTGAG TGGGCATGCT        37500
                           T
            ..37485]
TTGACGTTTT TCTGTGACCT CTGGGGAACA GGGTGGGTGA CCAGCAGAGG

CCCAGTCCCT GGAGCCAGGA GCCTGGGAGG CAAGCCCTGG GGCTGGATAG        37600
                                      T        A
CAAATCCCAG GAGCTAGAGA CCTGGCTTCT CACCTGGCTC TGCCCTAGGC
   T                                                 A
AAGTCCCTTT GCTTCCTGGC CCCCCACCCC TCACATCAGA GAAGGGGAGT        37700
                         T
TATCTCTGCA TGCCGCTCCT CCTCTGTAAA GGTAGGGCTG TGGGCCACAT
CTGTGTTTCC CAGTTTGGGG GACACAAGTG ATCGTAGGTG GCACATTGAC        37800
AGCTCACTTG AATAACCCTA TTATTGAAGA GAATAATACT GACTCAAGAG
ACAGTGACCC GTGTCAGTTC CCTTTTGAGG CCAACGGGTT AAGGAGGAAG        37900
TCCCCATACA GCTGACTCGT TTACTAATTC CTCTTAATGA AGAGAGCAGA
GGCCACACCC CAGGCTTAGA CTTTCCCAAG AAAACAAGAT CAGTTTGTTG        38000
GTTGTTCCCC ATGGAAGCTG GTCCTGACAT TCCCTTCACA GTAGTGTTGG
TGGAGTTTTT GTTGTTGTTT GTTTTGAGAC AGAGTCTCAC TCTGTCACCC        38100
AGGGTGGAAC ACAGTGGCGT GATCTTGGCT CACTGCAACC TCCGCCTCCT
GGGTTCTAGC GATTCTCCTG CCTCAGCCTC CTGAGCAGCC GGGACTACAG        38200
GCACCTGCCA CCGTGCCCAG CTAATTTTTG TATATTTAGT AGAGATGGGG
TTTCACTGCG TTGGCCAGGC TGGTCTCAAA CTCCTGACCT CAGATGATCC        38300
ACTCGCCTTG GCCTCCCAAA GTGCTGGGAT TACAGGTGTG AGCCACCGCA
CCTGGCCAGT GGAGTTCCTT CTTAAGTACA TGTATTGACA TCTTTAAAAA        38400
GGGCGAGAGG ATTTACAGGA AACTATCAGG TCAGTAATGG CAGGGGCCGT
CCACAGTGGG TGGCTGAGTC CCCCTATTTT TCTGCTGGTG TGCAGGGAGG        38500
TCATTTCCTG CCACCCATGT TTCCCCACCC TGAATCCACC TTCCTCACAT
TCCCATTGGA GGGACAATCT CTGGACATAT GGGACCTGGG GTCCCACAGG        38600
GCTGCAATCC AATGCCTGCT GTGCCACTCG CCAGCTGTGT GATGTTGGGC
ATATCCCATA ACCTCTTTGT GCCTCAGTTT CCTCATCTGT AACACAGGAG        38700
TGACAAGAGC ACCCGCCCAC AGGGCTATGA CAGTACAAGG TGTGTGATAC
AGATGAGCTC CCCTGTTTGG CCCACATGTG TCCTAAAAGC CATGTGCCCT        38800
TTCTCTTGAG TGCCCCAGGC CACAGAGATC CCCATCTGCC CGCTGTCCCA
CACACTGGTC TGTCATTTGT TCCTTGAGGT TTGTGAGGGC CGGCTCTGTG        38900
CATCCCAGGG GCCCAGGCTG GGCCTGGTTG GCTCTCAGGG AGCAGGCACC
CGCCACCTTA AGCTCCCATG CTGGTGTCTG TCACTGCTTC CTCTCAATCT        39000
GGCCAAGCCA GGGGTGTCGA TTTATATCTC TCAGGTCTGG TTTCCCCTTT
GGCACTGGGC CAGGTATGGG GAAAGAGCAG GAATGGGGCA GTTGGCTCAC        39100
ACAGCAGAGG CTCAGAAAGC GGGGGGCATG GGGGGAAGGA GTGCACAGAT
GCTAGAGAGT GGGGCAAGTT TTGTTTGGTC AATAAATCTC CTTCTCATGC        39200
CCCAGGCCTG TGCAAGACCT ACAGAGAGTC CCAAGGATGG GCTGGGGGGA
AGAGAAAGGT ACCACCTTCA GAGTCCAAAG ATATGTTATT TAATATTTTC        39300
ATATTTCTAG ATCTGCCTTC AGGCATGGCT GGATCCAGCT TCTAGGAACC
TGTCCAGCTC TGCGCCCTGC TTTATTCTGT ATTGGCTTCG TTTTTAGGCA        39400
GGCTCTTCCC TCATGTAGTG GCAGATATGC CTACTAGTTG CTCCAGGCCT
ACATCCCAAA GCCACAGTGG GAAAAGGGTT TTTTTCTTG ACGGTTCTAA         39500
TAAGAGTCCT AAGGCTGCTG CTCAGTGGCC TGGCTTCGAT GCTGTGCCAG
CCTCTGAACC AATCACTGGC TGTGGGTGGA GAGAGGGTGC TGGTGGAGGG        39600
```

FIGURE 1D

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CCCTGCTTGT CCAGGGAGGA GTCACATACC TGCCTCTAGG GCTGCAGGTG
GGCTCAGCTC CATCCAAACC AGATGAACTG AAAATAAGGC AGGAGTGGCT        39700
TCCCCAGGGG AAACTGGGGA AGAGGAAGCA GGACTGTGCT GGCTAAAATG
CCAGCCAGGT TTAAGACGTG GCACCAGATG CCAGTCATGG GATTGGATTG        39800
GTCAGCATGC CTGGGCTATG GCTTAGGGGT ATGTTGGTGC TCAGGGATGC
CACAGGCCTC CAGATACCAG GTCTGAGGCA GAAGAATGAA GTCCAGCTTC        39900
TCTTGTGGGT GGAACAGTGG CAACTGAGAT ACCCCATCTC TCCCTTCCCA
AGAACAGAGC TGAACATAAA GAATTTAGTG ATTGGCCAGA GCTTGGCCAC        40000
ATGCTCCCCT CTGATGAATG ATAGGCCAGG TGATGGGATT GGCACAATTG
GCTTAGACTA ATGAGGGTTG GCCCTGGAGT TGCAGGCAGT GGAGTTCTGT        40100
CCTAAGCAGT GGGCACCTAA ACCCGATGGC ATAAAAGCTG GCGGGTGTC
CACCTGCATC TGCCACAGCA CTATAGGCAC CAACTGTGGC TCATACTGAG        40200
TGGGATAAAT TCCAGAAAGA AACATTAGGA ACTTACTATA GAATTTTGGG
GCTAGAGCTA CTCATTCATT CCCCTAGATA ATTTCTAGGC AAGGTTCCAT        40300
AGTGGAGGGG GAGTTTTGGC TTGGGCATTG AAGGATGCAT AGGAGTTTTC
TAGATGGGGA AAGAAGGGAA CGGTAGACCA GGCAGAGGGA ACTGCATGAT        40400
AAAAGGTTTA TGGGTGTGAA AATTCATGGA ATGTTTGAGG ATTATGGGGT
TGGGGGATGT GGGAATATGT GTAGCGATAA AGCACCAAAC AAAGCCAAAA        40500
GTTTAGTTAG AGCCCTGAAT GCCTGCCTCA TAATGGTTTC CATATTTTAT
ATGCCTACTA TGTGCCAGGC ACATTGCTCA GGGTCACACA GCTGGAAATG        40600
GCAGGGCTGA GTTTTTGTTG TTGTTGTTGT TGTTGAGACA GAGTCTCACT
CTATCACCCA GGCTGGAATG CAGGGGCGTG ATCATGGCTC ACTGCATCCT        40700
TGACTTCCTG GGATCAGGTG ATTCTCCCAC CTCTGCCTCC CAGGTAGCTG
GGACTACAGG CACAGGCCAC CACGCCAGGC TAATTTTTTG TATTTTTAGT        40800
AGCGACAGGG TCTCGCCATG TTGTCCGGGC TGGTCTGGAT CTCCTGGCTT
CAAGTGATCC CCCTGGCTCA GCCTCCCAAG GTGCTGGGAT TACAGGCTTG        40900
AGCCACCGCA TCCAGCCCAG ATCTGAGATT TGCACCCAGT ATTTGAACTC
CCAAGCCTGT GCTCTTTTTC CTCCCATGGA CATTTCTCTC AGAGATGGTC        41000
TCCCAAACAC CTGTCCTTCT TGTTAAAAAA CAGACAAACC GCAAGTAGTT
CTTTGGAAGC TCAGATTTCT CTTTTGTTTC TTAGTAAAAC ATTTCCCAGT        41100
TCCCAGCTCC CTTCCAGGGT GTAAGATTTC TTCGGTAACT TACATCTAGC
TGTTGCTTCT TGTTTGCTCA TGTTTAGAAA GAAAGACAAA AGAGAGTGAG        41200
AATTTTCTCT CCCTTCCCCA GTCTCCCCAC AACTCACACC CCACCCTCAG
CTCCCTCTGT AATAGGAAAA TCTCTGAACT CTCTGTAGTT GCTCCAGCAA        41300
TCTTTTGGAA CTTTGCTTCT TTCTTGTGAA AAAACCTCCC CTTGGCTCAC
TTTGCACCAG GTTTCCCCAA ATGTGCTTCC AACCACAAGC AGAAATGGAG        41400
CTGCCAGTAA CCAGGAAGAA ACTGCCGGGG GCTGAGGAAG AGGAGAGGGA
GGTGCATAGC CCTGGATCTC GCAGGGAGAG GGGTGACAGG ATGAGAACTC        41500
AGGTTGCTCA CTTGCCATCA GGGTCAGTCA TGAATATAGC GTTCATGTAT
CACTTTTTAA AGCTTTTTTG GAGGGTAAAA GTAATAGTTA CACAAAATAA        41600
AAATACAAAT GGTACAAAAG GACTTAGAAT GGAAACATGT TTCTCTCCCG
ACTCCAGCCT CCTGTTTTTC TTCCCAGAGA CTGACCACTG CTGTCTGTCT        41700
CTTGCCAGAA GGGAAAGGGA GGCAAGGTTA GGGCAGGCAG AGGGCATGTG
CATCCTTTAG AGAGAGCTTA TGTCTATACA AGCAAATGTG TGTGTTCAGT        41800
CATCGCTGTC TTAGTTTTCT ATTGCTGCAT AATAATGGTA CTACCAGCTT
CACAGCTTTA AACAACACCC ATTTATTATC TCATAGTTTC TGTGGTTGGG        41900
AGTCTGGACA TAGCTTAGCC AGGTTCTCTG CTTTAGAGTC TCGTGAGGCT
ATAATCAAGG TGTGGGATGG GGCTGCAGTT TCATCTGAGG CTCAATTGGG        42000
GAAGGGTCAC TTCTAAGCTC ATACAATATT GGTGACATTC AGTCCCTGGC
AGGCTGTTGA ACTGAGAGCC TCAGTTTCGT GCTGGCTGTT GGTTGTAGTT        42100
AACCCTGAAT TCCTTCCCAT GTGCCCTTTG CAAAGCCATC AAGGCAGAGA
GACTTGCCTA GCAAGTAGGA TATTACAGTC TTCTGTAATA TAATCACATC        42200
CATGAAATCC TCTATATATC CCATCACCTT TACCATATTC TGTGGGTTAG
AAACAAGTAG CAGGTCCTGC CCACACTCGA GAAGACCAGA TGACACAAAG        42300
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<div align="center">FIGURE 1E</div>

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ATGTGATTCA AAGTGGGGAT CATCGGGGCC ATCTTAGGTT TGTCTGCAGT
GATCACTGTG CCATCTCTCT CTCTCTCTTT TTTTTTTTTT TTTTTCCGAG    42400
ACGAAGTCGT CACTCTGTCA CCCAGGCTGG AGTGCAGTGG CATGATCTCA
GCTTACCACA ATCTCTGCCT CCCAGGTTCA AATGATTCTT CTGCCTCAGC    42500
CTCCTGAGTA GCTGGGATTA CAGGTGCCCG CCACCACACC CAGCTAATTT
TTGTATTTTT AGTAGAGACA GAGTTTCACC ATGTTGGCCA GGCTGGTCTT    42600
GAACTCCTCA CCTCAAGTGA TCCACCCACT TCGGCCTCCC AAAGTGCTGG
GATTACAGGC ATGAGCCACC ATGCCCAGCC CCATCTCTCT TTAAAAAACA    42700
AACAAACAAA CAAAAAACAT AAAAAGAAGC AGAGAACACA TACACATCTG
CATCTTCCCT TGTTTACTTA ACAATAGATC TTGGAAGTCA CTTCTCAGTA    42800
GAGGCTAGGT TGGGCAGAGC ATTGGATTCT AGGCCAGTGA GTTTGGACTT
GACCATGGAG ACACTAGGAA GCCCATGAAG GACAGAGAGA GATGCCTCGA    42900
CCCTGCCAGT CCTTTAGAAA GATCACCCAG TGCTTTTTGT ATACCAAACC
CTATTTGAAA TACTTACGTA TATTAACCCA TTTCCTTATC ACCACAACCC    43000
TGCGGGAAGG GAGATAGGCA CTTTTATTAT CTTCATTTTG CAGATGAGGA
CATTGAGGTC CAGAGAGGTT ATGTCACTTA CTTAAGGTCA CACAGCCAGG    43100
AAGTGGTAGT AGGGACTCTT ACCCTTGTTT TACAGATGAG ATTGAATTAT
CTCACGAAAA CTCAGAAAGG TTAAACAACT TGCCTAAGTA ACATACAGCT    43200
AATTAGTCGA GGAGCCTGAC GCATGTTGCT CTAGCCTGGT CACAGTTACA
GAGGTGGCAA GCAATGGCCT GAACAGGACG AACAACCAAA TACCCAGGCT    43300
GGTGGCTCTT AAACATGGTG GGGTCAGCTA ACGACAGCAA CCAGGGTGGG
CACTGGTGCC CCTCGCCCCC GGCTGGTGCC CTAACATCTC CCTTTTCTCT    43400
ACCAGTTCAG AATCTATAAC GTGACCTACC TAGAACCCTC CCTCCGCATC
                                                     A
    [exon 7: 43406..
GCAGCCAGCA CCCTGAAGTC TGGGATTTCC TACAGGGCAC GGGTGAGGGC    43500
CTGGGCTCAG TGCTATAACA CCACCTGGAG TGAGTGGAGC CCCAGCACCA    43600
AGTGGCACAA CTGTGAGTAT CAAGAGGCCT AAGCAATGGT AATCTCCACT
                  ..43562]
CTCCATTCTT CCCCTGTGGC CAGACACTTC CCCTGGCTGA GTCTCTGGGC
TTTTATATCA TAGGATGCCT CTAATGGCAA TCCTGCCATT AGATACACCT    43700
GCTGTGGTGT ATCTGCCAGG TAGGCAGGCT AGGCTGCAGT AACACACAAG
    C
CCCACAATTT CCATGGCTTA ACACTATAGG AATATATTTC TTGCTCATGT    43800
AACAAGCTAA CGTGAATGTT GCTGGTTTGT AGGTGGTTTC CCTCCCTGTA
GAAATCTGGG GAGTGAGGTT CTTTCCATCT TGTGGTGCCA TCATTCTCCA    43900
GGACAAAGAT TCTTACCTAC TTTTGTGTCC TGGTTTCCTT TGGCAGCCTG
GTGAAGCCTA TGGACCTCAT TTCAGAATAT TTTTAAATAC ATAAAATCCC    44000
AGCCTGGGCA ATATAGTGAA ACCCCATCT GTACAAAAT TAGCCAGGCA
TGGTGGCATG CACCTGTAGT CCCAGGTACT GGGAAGGCTG AGGTGGGAGG    44100
ATCACTTGAG CCCAGGAGTT TGAGGCTGCA GTGAGCCGTG ATCGTACCAC
TTTACTCCCA CCTGGGTGAC AGAGCAAGAG CCCATCTCTA AAAATAAATA    44200
AATACAATGA AATAAAATAA AATAAATAGA ACTACAGAGG AAACTAATTG
TATTGAAATG CAGTTATAAA ACATTAAAC ACATTTTTAA TCTAGAGATA    44300
TATGTGCTTC TTTATTAAGA TCTATAAATA ATAAGTTCTA GGGGTAGCTC
GCATAAATAC TGTAATTTCA AAGTAGATAA GCATAAATAA TACTTTATGA    44400
TACTGAAATT GTGATGTGAT ATGAGAATAG CTGTGAGTTT TGTTTTGCTG
GGGACAGGAT CACTGATGCT GTCATTACTG GGGTCTCTTC CCTCCATTCT    44500
TTTTTTAAAA TTGTATTTTA TTTTATTTTT AAAATTTTAA AATAAATAGA
GACAGGGTAT CACTATGTTG CCCAGGCTGC TTTTGACCTC CTGGGCTCCA    44600
GTGATCTTCC CATCTTGGCT TCCCAAAGTG CTGGGATTAC AAGTGGGAGC
CAGTGTTCCT GGCCCCTTCC TCCATTCTTA ATGGAAGGAG ATGCTAGGTG    44700
TGAGAGGTTA GGGAAAGTAA AGATGTAATT TCTTTCCCAT CCAAGTTCTC
AGACCCCTGA ATTCTACCTG CAGCCATGTT GGTCCATCAA CCCCAAGTGA    44800
```

FIGURE 1F

```
GAAGCCGAAT GAGGTCATTA GCAGACCAGA GGCTTTCCCG CCCTTCCCCT
TGGCAATCCC AGCCTGGGGT GGGCTTCTCT GGGGTTGGTT TCCTGTTTTT        50100
TTCCCTCCCC TTGGGAGAAT GACCCTTGGG TCATCATCAC TGTGTCATTC
CCTGGGGAGG TGCCAGTACC AGGGCTAGAG GCCAGAAGGA GTGGAGGAAG        50200
GAGAGGGTGA CAGGCTTTCT GTGTCTTCTT CTTAAGCATA GGAAACTGCC
CCCGAAGCAC TAGCAAATCC CTTCCGGGTT CTCATTGGCC TGAAATGTAT        50300
CCCACCCCTA AGCCAGGGGT GGAGTCAGCT TCCCCAAGGC GATGGTCCTG
TGGGTGAGTG GGTGGGGTTT GCCTGAGCAA GATGAGAGTT CTCTAGGTAG        50400
GAGAAAGGGG GATTATAGGT CCTGTCTAGA AGAGAAGGTC TGAGGGTCCT
TGCTTTTCCA GGGACTCTGG AATCTAGTGT TGGCTTTGAA TCCTGACTCT        50500
GCCACTCACT GGCAGTGTGG ACTTGAGCAA GTTGCTTAAT TCTCTGAGCC
TCAGTTTCCT CTTGTGGGTT ATAACAGTGT TTACCTGGTA GGACAGATAT        50600
TGGAATTTAT TGAGACAATA CATATAAAGT GCATATTCCA GCCTCTTGCA
AATACCAAGT GCCATTTATG TATCAGTTAG TGTTTGCTGT GTAACAAATG        50700
ACCCCGAAAT GTAGAGGGTT ACAACAACTT TATTTAGCTT ATGCTTCTGC
AGGCTGGCAT TTGGGGCTGG GCTCAGCAGT GAGGGTGGCG GGGGAGGCTG        50800
GGCTGGGCTG GGCTGGGCAG ATCTGAATTG AGCTGACCCG TCCCCGTAGC
CTCCCTCCGT GTCTGACAGT TGGCTTTTTT TTTTTTTTC TTTTCTGAG         50900
ACGGAGTTTT GCTCTTATTG CCCAGGAGTG CAATGGCATG ATCTTGGCTC
ACTGCAACCT CTGCCTCCTG GGTTCAAGCA ATTTTCTTGC CTCAGCCTCC        51000
CAAGTAGCTG GGATTACAGG CATGTGCCAC CACGCCAGGC TAATTTTGTA
TTTTTAATAG AGATGGGGTT TCTTCATGTT GGTCAGGCTG GTCTGGAACT        51100
CCTAATATCA GATGATCCAC CCACCTCAGC CTCCCAAAGT GCTGGGATTA
CAGGCGTGAG CCACTGCACC CAGCCTAGTT GGCTGACTTT TACCTGGGAC        51200
AGTGCAGGTG CCTGAGCCAT GTGCCTCTCA CTCTCCAGCA GGCCGGCCCA
GGCTTGTTTA CAGAGTGGCT CAGTTTTCAA GGGTGGGAAG TCCCAAGGCT        51300
TCTTGAGGCC TAGGCGCAGC ACTGGCATGA TATCACTTCC ATCACATTCT
ATGGGCCCAA GCAAGTCCCA GGGCCAGTGT AGATTCAAGG GATGGGAGGA        51400
GATTCAGAGC ACTCCTCTGT GGCCACTTTT GCCATCGACC ACAGTCCCTG
TAAATATTAG GACAATGTAA TTAATTCCCA GGAATCTGAG GCTCAGAAAG        51500
CGTAAGTGAC CTGTTGGACT TCTGATCTGT GTGATGTCGA GGCTTGTACC
CCTTCCTGAG CATTGCCGTA CTCCAGGCCG GGCTGCAAGG CCACTCTGCT        51600
CTTTCATTGG CTGTCTCTGT ATTTTAGGGG TCACAGTGGG AGAAGCGGTC
      [exon 10: 51628..
CCGAGGCCAG GAACCAGCCA AGTGCCCGTA TGTATCTGAA CTTAGGTCAC        51700
             ..51677]
AGCCTGCATG CATTGGGAAG GTGATAGAAT TGGAGAGGCA AGCCCCTAGC
TCCATGTCTG CCTTCTCTTC CCTGCATTCG GTAATTGCCC TGTGACATTA        51800
GCCTTCAAGG GACGGCAGGA GGAGGGGTGT TCTGGAAACG TGGACTGCTG
GCCAAGCCCC CTGAGTTTCA CTGGTGTGTC AGGTACATGG TGATACCCCT        51900
TGGGAGTGCT GTTATAGTTA ACAACCAGAG CAGCCGTGCC TGTTGTTAAA
ATCTTGACCT AATTGTATAC TTGTCGGCAA ATAGCCACTA TCCTGAACAC        52000
TCCCCTCCTT TTTTTAATA TACAGGATCT CACTCTGTGG CCCAGGCTGG
TGTGCAGTGG TGCGATCATA GCTCACTGCA CCTTCAAACT CCTGAGCTCA        52100
AGTGATCCTC CCATCTTAGC CTCCCGAGTA GCTGATACTA CAGATGTGCA
TTACCACGCC TGGCTATTTT AAAAGGTTTT TGCCTGTAAT TCCAGCTACT        52200
CAGGAGGCTG AGGCATGAGA ATCACTTGAA CCCGGGAGGC AGAGGTTGCA
GTGAGCGCAG ATTGTGCCAC TGCACTCCAG CCTGGGCGAC AGAGTGAGAC        52300
TCTTGTCTCA AAAAAAATAA TACCAAAAA AGTTTTTGTA AAGACAAGCT
CTCGCTGTGT TGCCCCGCCA CTGTGGCCTC CTTAGCTTCT TCCCTGGGGC        52400
CTGCTGGACC TTTCCATACT CCAGAAACTA AAGGGGGTCC AGGACCCTGC
TTCAACCCTA GGATCCCGCA TCTTTTTTTT TTTTTTTTT TTTTGGACGC        52500
AGGGTCTTGC TGTGTCCCTC AGGCTGGAGT GCAGTGATTC ACTGCAGCCT
CAAACTCGTG GGCTCAAGTG ATTCTCTAGC CTCAGCCTTC TAAGTAGCTG        52600
```

FIGURE 1I

```
AGAATCCCTG CTCTAGGGCC CCACCATTGT CTGTATCCAG CCAGCAGAAG
AGGCGTGATT ATGGAGATCA CATCTGCTTC TTGAAAGCAG ACAGCCCGGA          44900
AGTGGGCCGC ATCACTTCCT CTCAAATTCT ATTGGTGAAA ATGGTCACAT
GACTACACAT AGCCACAAAG GAGGCTGGGA ACTTTCTCAC TTGGAACCTA          45000
CATCCCAGAA ACAACTCTTT TCAGTGAGGT ATCCCACAGG TCTTTCGCAG
TAGAAATATT GATTATCTCA CATAAAATGA AGTCTTACAA ATGGACCTAC          45100
TGGGTTTTGT ACAGCAGCCA AGTGATATCT CTTCCCTTCT GCTGTCTTCC
CTTCTGCCGT CCTTCACATG GTGGCATTGT ATCCTTAGAC TTGCCACCCA          45200
TGCCCTCAGG TTGGCCGTTG CACACTGTCT TACATAAAGC AGGAAGGAAA
GGAAAGGCTG CTACGAGAGA GTGTACCTTG TGCATCTCTT TTTTAATCAG          45300
GAAGCAAACA TCTTTCTAGA AGCTTCCCTA GCAAAATTCC CCTTACATCT
CATTGGCCAA GACTGTTACA TGTTACATGG TTACTGTTAT TACTTGCTCA          45400
TTGCAAGGAA GACTGGGAAC TCAAATGCCT GGAAAAAGGA ACAGGATAAT
CGTGATTGGC TCAAGCCTTA GGGTGGGCAT GGCTCCCTGA CAAGGGAGAG          45500
AGGAAAAAGC TGTTGAGTGA AGAAGACTGC TTCAGTTTCC CCATCTGTAT
AATGGGAGGA GTAAGGGCTG TCGTGAAAAC TCAATGAAAG AAGATTCTTC          45600
AACGTGGTAG GTGCAGTGGC AGCTGGCAGT ACCCTGACCC TGCCACCGCA
CAGCCCTCTC AGCATTGCTC ATCCTGCACT GTGGATATCA GTTGAGCCAC          45700
GTGTCTCCTG CCCTGGGCTG TGAGCTCCAT AGGCAGGGTC TCCATGGCTG
TATCTCCAGA ACCCAGCACA GAACCAGGTG CTTGGGAAAG TTTTGAATTG          45800
ATTCTCATCT GCCATTGGCA TGGGGAAGGG AACTAGCTTG TATGAAACAG
ATAACAATGT ATGGGACCCT CATTCATTAT TTCAGCAAAT ATTTGCTGAG          45900
TTCCTCCTAC ATGGCTAGCC CTGTGCTAGA CACTGGGGAA TCGGCGATGA
ACAAAGCAGA TAGAAATCCC CACTCTTGTG GAGCTGACAT TCTGGAGGGA          46000
GAGACAAAAA GCAAACATAT AAAGAAGAA AGAAATCACA TGGATCTGGA
TGACAGTGAG TGCTGGGAAG AAAATAAAAG CAGAGGAAGG GGATGGAGCG          46100
ATGGGCAGGG GGCAACGGTA GGGAGGGTGT CGGGGAAAAC TTTTTGGAGA
ATGTGACGAT GAAAGTGAAC AAGGAGAAGT CAACCGTGTT GAGATGATGG          46200
CAGCTAATGA TGTGGACAGG CCACTCTGTT CTGAGTGCAT TATCTATTGA
TTCATCATGT CATCCTCGCA ACAGCCCTGC ACGATCAATT CTGTCATTAA          46300
CCCCATAGTA CAGATGAGGA TGCGGAGGCA CAGAGAAGAT AAGGGACTTG
TCCTGTGTCA CACAGCAAGG AGCCATCCGG CTCCTAAGTT GGTGCATTTG          46400
ACTTCTGTGC TTCCGGAAAG AAAGAGCAGC AAGTTTAAGA TCTGGAGGTG
GCACTGAGCT TTGGAGGAGC AGGGGGCAAT GAGGTGGCCG GTGTGACGAG          46500
GACTCAATGT GCAAGAGGGA GAGTGGTGGG GAGATGAGGT GGAGGGGTGG
TCGGCGGTCA GATCGTGGAG GGTCTCGGAC GAGGGTCCTG ACCCTGGGTC          46600
TCCAGTCCTG GGAAGTGGAG CCCAGGCTGT ACCATGGCTG ACCTCAGCTC
ATGGCTTCCC CTCCCACTTC CAGCCTACAG GGAGCCCTTC GAGCAGCACC          46700
           [exon 8: 46674..
TCCTGCTGGG CGTCAGCGTT TCCTGCATTG TCATCCTGGC CGTCTGCCTG
TTGTGCTATG TCAGCATCAC CAAGTGAGTC CTGGGCCCAG TGCTGCCGAG          46800
                ..46773]
CAGTCCCTCT GGAGTGCAGG GTGGCAGGGA CTTGCCCCTC TAGTCTGCCC
CTTTGCAGTC CTCTCAGTCA ATAATACGTA TTTACTGAGC AGCTACTACA          46900
CACCTTGAGA GTAGAGCTGA GAACATATCG ACAAGGACCC CACTTTTTTC
TTTTTTTCTT TTTTTTTTT TTTGAGACG GAGTCTCACT CTGTCACCCA          47000
GGCTGGAGTA TAGTGGCACA ATCTTGCCTA ACAGTAACCT CCGCCTCCCG
GGTTCAAGCA ATTCTTCTGC CTCAGCCTCC AGAGTAGCTG GGATTACAGG          47100
CGCATGCCAC TATGCCCGGC TAATTTTTTG TATTTTTGGT AGAGATGGGG
TTTCACCATG TTGGTCAGGC TGGTCTCGAA CTCCTGACCT CATGATCTGC          47200
CTGCCTCAGC CTCCCAAAGT GCTGGGATTA CAGGTGTGAG CCACTGCACC
CAACCAGGAC TCCACATTTC TAAAACCGGC ATCCTACTGG GGAGACTGAA          47300
AATACATATC AATCACAAAC AGGTGGTTTT CCATAGTGAC CCACTCTCTG
AATGCACTAG ACCAGGGTGG AGGCCAGAGA TCTTCTGGGG TGCTTTTTGC          47400
```

FIGURE 1G

```
AAGGGGGACC AGGATAAGGC TCTCCAAGGA GGGAAAATTT GAGGGGGGCC
CTGACTGGGG AGAATGAGCT GGCCAGGGAT AAGCAAGATG GAGTCATCCC          47500
ACATCCCCTT ACAACACTGG GTGCCTGGGC AACTGGGGGC ATTTGGGGGC
ATGTGGTAGG AGCCAGAGGA ATTTGCGACG ATTGCCCTGA TGGAGTCAGG          47600
AGACCTGGGT TTGAATCCTG GCCTTGGAGC TTGGTAGCTG GCGGCCGACA
AGTTGCTGAA ACCCCTGAGC CTGGGGTTCC TGCTTTGCAG AGTGACAGTG          47700
ATGGTGAGAA CATATTTCAT CAGCCAGAAG AGGCCAAATC ACAGTAAAGG
CTGAGGGAGG AGATGAGTGG CGAGTGGCTG GGAGGTGGTG GAAGGAGCCT          47800
CGTTTCCAGA GAGCTCTTGC CAGCCCTTGG AATCATGGTG TCTCAGAGCC
TCAGTCCTCC CATCTCTGAA ATGGGACTAG CAAGCTCAAC CTCACTAAGT          47900
CAGGATTAGA GGTGGCTAAG GATTATTAAC ATGATTGATG AAAGTGCCCA
CTCTTGGCCC AGCACACACT AGGTAGGCAG GGAATGCAAA TTCCCCTCCA          48000
TATCTTGTCA CTGATGCCTC CGAGCAACCT TGGACTGATC GCCTTGCTCT
GAGCCTCAGT TTCCCCATCA CCTGTACCTC TTCCCACTCC CCATCACTAT          48100
ATCCCAGCAT GCCAGCCTCT TTGCTGTTCT TTGTCTTTGG TTTCTTGTTT
TGTTCTGTTT TTTAGACAGG GTCTCACTCT GTTAGCCAGG CTGAAGTGCA          48200
GTGGCGCGGT TACGGCTCAC TGCAGCCTCC AATTCCTGGG CTAAAGAGAT
CCTCCCATTT CAACTTCCAG AGCAGCTGGG ACAACAGGCG CTTGCCACCA          48300
CACCTGGCTA ATTTTCTTAT TTTAATTTAA TTTTATTTTA TTTTTTGGGA
CAGAGTGGAG TCTCAAAAAC CAAGCTAGAG TGCAGTGGTG CGATCTCGAC          48400
TCACTGCAAT CTCTGCCTCC CGGGTTCAAG CGATTCTCCT GCCTTAGCCT
CCCGACTAGC TGGGATTACA GGCGTGTGCC ACGACACCCA GCTAATTTTT          48500
GTATTTTTAG TAGAGATGGG GTTTCACCAT GTTGGCCAGG ATGGTCTTGA
ACTCCTGACC TCAAGTGATC CACCCACCTC GTTCTCCCAA GGTGCTGGGT          48600
ACAGGCATGA GCCACTGTGC CTGGCCAATT TTCTTACATT TTGTAGAGAC
TGGCTGTCAC TTATGTAGCC CAGGCTGATC TTGAACTTCT ACCCCTTTAT          48700
CTTTATTCAT GGCACTTATT ACCATGAATG AATGACCTCA TATAAGCATT
TCTTTCGTTT TTTTTTTTTT TTCTTTGAGA TGGAGTCTCA TGTTGTCCCC          48800
CAGGCTGGAG TGCAGTGGCG CGATCTCAGC TCACTGCAAC CTCCGCCTTC
CGGGTTCAAG CGATTCTCCT GCCTCAGCCT CCTGAGTAGC TGGGATTGCA          48900
GGCGCCTGCC ACCATGCCTG GCTAAGTTTT GCATTTTTAG TAGAGACGGT
GTTTCACCAT ATTGGCCAGG CTGGTCTCGA ACTTCTGACC TCAGGTGATA          49000
CACCTGCCTT GGCCTCCCAA AGTGCTGGGA TTACAGGCGT GAGCCGCCAT
GCCTGGCCTC ATATAAGCAT TTCTGTCTCC ATTTATCATC CATCTTTCCC          49100
TCTTGAAGGT CAGTTTCACC AAGGCAGGCA TCTTTGTCTC GTTCACTGTT
GTAGCCTCAG GGCCAGGCAC AGTGAGTCAA ACATAGAAGG TGCTCAATAA          49200
ATATGTGTTT ATTTATTGAA ACCATGGGCA GAGGCTAATT CAGAAGCGGT
CTGAGGACCT TACCTCCCAG TGATGATGCA CCATGGCCCC AGGCAGGCCA          49300
GGAAGAGAGA AGGGTTGTGT TTCTCCGTAG GTCCCCCAGC TTCCCAGGCC
ATCCCAGGCC ATTCCCTGGT CATTTGCCCT CAGCTGCTCT GAAAAAGGGA          49400
TTGTTGAGGG GAACCTAGAA TCCTCTCTCT GCAGTTTGAG TCTTTCCTAA
TCCCCTGGGG TCTCATTCCC ACTGAGGACA TAGGTGGCCT CCTCAGGAAC          49500
TCTGTGCTGG GTAACAGAAT GCGGGAGTGT GAACCTGGCT CTGCCACCTA
CCAGCTGTCA CTCCACCTCC TTGGGCCTCA CTCTCCTCAT CTGTAGAATA          49600
GGGTTAGCAA TAGAATCCAT GTCACCAGGT TAGAATGATG AGTCAGTGGT
TTGACCTCCA GAAACTAATC AGCCTGATCT CTGATGCCAA ATAAGTATTG          49700
GTGATAACGA CCACTTTTAT GGGAGGAGCG TTCACCTGTC AATAATTCAG
AGATCAACAC CTTTTCCTTT TGTTTTTCAG GATTAAGAAA GAATGGTGGG          49800
       [exon 9: 49781..
ATCAGATTCC CAACCCAGCC CGCAGCCGCC TCGTGGCTAT AATAATCCAG
GATGCTCAGG TAGGAGTAGG CGTGGATGAG GACATGTGGG ACTGTGTACA          49900
       ..49859]
TGAAGAAGTG TGGTTCAGAA CACCTGGGCT GTTAAGGACC TTCACTGGCT
TCTGGAATGG CAAATAGACA GTCAGGAGGG TTGCAGGGGA GACAGAGGCA          50000
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FIGURE 1H

```
GGACTACAGT CATACACCAA CATGCCCAGC TAATTTTCCT TTTTTTTAAT
TCTTGTAGAG ATGTTTGAGA CGGCTTGGGC TCTGTTGCCC AGGCTGTTCT          52700
CAAACTCCTG AGCTCAAGCG ATCCTCCCTC CTCAGCCTCC TAAAGTGCTG
GGATTACAGG CGTGAGCCAC CGCACCCGGC TTCCATATCC TTTCTAATTG          52800
GTCATGGCTT GGGATAATGG TGTTGCTTTT AATTATCATC ATCCATAAAG
ACTTTTTCTT ACTCAACAGA TCTGAGCTTG TATTTGGTGC CCAGGACATG          52900
TGCTGGGTTC CCGAAATCCC AAAGACACAG ACCCTACCCT CAGGGATTTC
TCATTCTAGC AACATAGACT GATCAATTAC TGATTATAAC GTTAGAAGGC          53000
ATGTCTGAAG TAGACAGCCA TCAGGACATG GTGATTCAG GCTGGGCTTT
         C
GAAGAATGAA TAGGAGTTTT TCAAGTGTCG AAACTGAACC CTGACCAACC          53100
                                                    T
TTTGCTTTTG CAGACACTGG AAGAATTGTC TTACCAAGCT CTTGCCCTGT
      [exon 11: 53114..

TTTCTGGAGC ACAACATGAA AAGGGATGAA GATCCTCACA AGGCTGCCAA          53200
        C
AGAGATGCCT TTCCAGGGCT CTGGAAAATC AGCATGGTGC CCAGTGGAGA
TCAGCAAGAC AGTCCTCTGG CCAGAGAGCA TCAGCGTGGT GCGATGTGTG          53300
GAGTTGTTTG AGGCCCCGGT GGAGTGTGAG GAGGAGGAGG AGGTAGAGGA
AGAAAAAGGG AGCTTCTGTG CATCGCCTGA GAGCAGCAGG GATGACTTCC          53400
AGGAGGGAAG GGAGGGCATT GTGGCCCGGC TAACAGAGAG CCTGTTCCTG
                    C
GACCTGCTCG GAGAGGAGAA TGGGGGCTTT TGCCAGCAGG ACATGGGGGA          53500
        T
GTCATGCCTT CTTCCACCTT CGGGAAGTAC GAGTGCTCAC ATGCCCTGGG
   C T       C
ATGAGTTCCC AAGTGCAGGG CCCAAGGAGG CACCTCCCTG GGGCAAGGAG          53600
CAGCCTCTCC ACCTGGAGCC AAGTCCTCCT GCCAGCCCGA CCCAGAGTCC
AGACAACCTG ACTTGCACAG AGACGCCCCT CGTCATCGCA GGCAACCCTG          53700
CTTACCGCAG CTTCAGCAAC TCCCTGAGCC AGTCACCGTG TCCCAGAGAG
                    C
CTGGGTCCAG ACCCACTGCT GGCCAGACAC CTGGAGGAAG TAGAACCCGA          53800
GATGCCCTGT GTCCCCCAGC TCTCTGAGCC AACCACTGTG CCCCAACCTG
AGCCAGAAAC CTGGGAGCAG ATCCTCCGCC GAAATGTCCT CCAGCATGGG          53900
GCAGCTGCAG CCCCCGTCTC GGCCCCCACC AGTGGCTATC AGGAGTTTGT
          T                                      G      A
ACATGCGGTG GAGCAGGGTG GCACCCAGGC CAGTGCGGTG GTGGGCTTGG          54000
GTCCCCCAGG AGAGGCTGGT TACAAGGCCT TCTCAAGCCT GCTTGCCAGC
AGTGCTGTGT CCCCAGAGAA ATGTGGGTTT GGGGCTAGCA GTGGGGAAGA          54100
GGGGTATAAG CCTTTCCAAG ACCTCATTCC TGGCTGCCCT GGGGACCCTG
CCCCAGTCCC TGTCCCCTTG TTCACCTTTG GACTGGACAG GGAGCCACCT          54200
CGCAGTCCGC AGAGCTCACA TCTCCCAAGC AGCTCCCCAG AGCACCTGGG
                                           T
TCTGGAGCCG GGGGAAAAGG TAGAGGACAT GCCAAAGCCC CCACTTCCCC          54300
AGGAGCAGGC CACAGACCCC CTTGTGGACA GCCTGGGCAG TGGCATTGTC
TACTCAGCCC TTACCTGCCA CCTGTGCGGC CACCTGAAAC AGTGTCATGG          54400
CCAGGAGGAT GGTGGCCAGA CCCCTGTCAT GGCCAGTCCT TGCTGTGGCT
GCTGCTGTGG AGACAGGTCC TCGCCCCCTA CAACCCCCCT GAGGGCCCCA          54500
          G
GACCCCTCTC CAGGTGGGGT TCCACTGGAG GCCAGTCTGT GTCCGGCCTC
CCTGGCACCC TCGGGCATCT CAGAGAAGAG TAAATCCTCA TCATCCTTCC          54600
ATCCTGCCCC TGGCAATGCT CAGAGCTCAA GCCAGACCCC CAAAATCGTG
          C
```

FIGURE 1J

```
AACTTTGTCT CCGTGGGACC CACATACATG AGGGTCTCTT AGGTGCATGT          54700
                                                    C  C
        ..54692
CCTCTTGTTG CTGAGTCTGC AGATGAGGAC TAGGGCTTAT CCATGCCTGG
                                                    T
GAAATGCCAC CTCCTGGAAG GCAGCCAGGC TGGCAGATTT CCAAAAGACT          54800
                                G
TGAAGAACCA TGGTATGAAG GTGATTGGCC CCACTGACGT TGGCCTAACA
CTGGGCTGCA GAGACTGGAC CCCGCCCAGC ATTGGGCTGG GCTCGCCACA          54900
TCCCATGAGA GTAGAGGGCA CTGGGTCGCC GTGCCCCACG GCAGGCCCCT
GCAGGAAAAC TGAGGCCCTT GGGCACCTCG ACTTGTGAAC GAGTTGTTGG          55000
CTGCTCCCTC CACAGCTTCT GCAGCAGACT GTCCTGTTG TAACTGCCCA
AGGCATGTTT TGCCCACCAG ATCATGGCCC ACATGGAGGC CCACCTGCCT          55100
                                     G
CTGTCTCACT GAACTAGAAG CCGAGCCTAG AAACTAACAC AGCCATCAAG
                                                    A
GGAATGACTT GGGCGGCCTT GGGAAATCGA TGAGAAATTG AACTTCAGGG          55200
AGGGTGGTCA TTGCCTAGAG GTGCTCATTC ATTTAACAGA GCTTCCTTAG
GTTGATGCTG GAGGCAGAAT CCCGGCTGTC AAGGGGTGTT CAGTTAAGGG          55300
GAGCAACAGA GGACATGAAA AATTGCTGTG ACTAAAGCAG GGACAATTTG
                          A
CTGCCAAACA CCCATGCCCA GCTGTATGGC TGGGGGCTCC TCGTATGCAT          55400
GGAACCCCCA GAATAAATAT GCTCAGCCAC CCTGTGGGCC GGGCAATCCA
                                 T
GACAGCAGGC ATAAGGCACC AGTTACCCTG CATGTTGGCC CAGACCTCAG          55500
GTGCTAGGGA AGGCGGGAAC CTTGGGTTGA GTAATGCTCG TCTGTGTGTT
                                                 T
TTAGTTTCAT CACCTGTTAT CTGTGTTTGC TGAGGAGAGT GGAACAGAAG          55600
GGGTGGAGTT TTGTATAAAT AAAGTTTCTT TGTCTCTTTA TTTTTTATGT
ATTAACCAAA CATACCTCCA GACACTGCTG TGAGTGCTGT GTCTCTGTTA          55700
ACTCCTGGAA TTCACCCATC CAGAGGAACC AGGATGCAAG AGGTTAAGAA
ACTTGCCGTC TGGGTTTGGG TTCCCCATAC AAGGATTCAA ATAGTTGATT          55800
       A
TAGGAAGTAA TCCCGGGAAA CCCTGCTAAG GTAGTGGGGA ACTGAGGCAG
GGAAGGACAC AAACCAAGAA AGTGTTACCT GAAAGGGGTC CAGATGCAGA          55900
CCCCAAAAGA GGGTTCTTGA ATCTCATGCA AGAAAGAATT CAGAGCGAGT
CCATAGAGTC AGTGAAAGCA AGTTAATGAG GAAAGTAAAG GAATAAAAGA          56000
ATGGCTACTC CGTAGACAGA GCAGCCCTGA GGGTTGCTGG CTGCCTATTT
TTATGGTTAT TGATTAATTA TATTCCAAAC AAGGGGTGGA TTATTATGCC          56100
TCCCTTTTAG ACCATATAGG GTAACTTCCT GATGTTGCCA TGGCATTTGT
AAACTGTCAT GGCGCTGTTG GGAGTGTAGC AGTGAGGACA ACCAGAGGTC          56200
ACTCTTGTTG CCATCTTGGT TTTGGTGGGT TAGAGCCATC TTCTTTACTG
CAACCTGTTT TATCAGCAAG GTCTTTATGA CTTGTATCGG TGACGACCTC          56300
CTGTCTCATT CTATGACTAA GAATGCCCTA ACCTCCCAGG AATGCAGCCC
AGTAAGTCTC AGCCTCATTT TACCCAGCCC CTCTTCAAAG CTCCAGTTTA          56400
AATAAACCTC TGACAAAAGG GTGAGTTATT CAACAGATTA CCAGCATGAG
TAACTGATGC TTACCTGCCG GGGATCTCTG GAAGACCATG CATGGCACAT          56500
GCCCAGTTAT GCCTGCAAAG GAGAGGGAGC TGGGGTATTT GTCCACCAGC
TCCCATCTGT CATTGGCTGA GAGCTGCTTC CAGGAGCATT AATTCTCCAG          56600
CACTTCCAGC TACTCCAGGA AAAAAAAAT TCTTCAACTG AGAGTTGGAG
GTGTTGAGAG ACTCTGGCAC ACCAAGAAGA CAGGAACAGG ACACCAACAG          56700
TGGCTGATGA TACACTGCCA AGGTCACACA GCTAGTTAGC AACAGATCTA
TAGTGGAATC CAGACAGTGT CTCCATCACC CAGGCTCTCT GTAGTGATCT          56800
GCGCTTCACA TCCGAGGCAG GCAGAGGGAT GGTGTGGGCC TTAGATGGGA
```

FIGURE 1K

```
AGGCTGGGAA CCTGAAGCTC CTATGTCTGT ATCACTTTTG CTTCTCTGAG      56900
TAGCTGCCCT GATTTCACAC TTGAGGGGCT TGGCCATTTT AGATTCCTTC
CTGCTCTAGG AGCCTACATA CTACACTGGA AATGATGGGG AGCTCTCTAC      57000
CTCACATGCA GCCTGATGTT TGTTAGAAAC ACCTCCTTGC GCCAGGCATG
ATGGCTCATG GCTGTAATCC CAGCAATTTG GGAGGCTGAG GCGGGTGTAT      57100
CACTTGAGGT GAGGAGTTCA AGACCAGCCT GGCCAATATG GTGAAACCCT
ATCTCTACCA AAAAATAAAA AATTAGCCGG GTGTGGTGGT GGGTGCCTGT      57200
AATCTCAGCT ACTTGGGAGG CTGAGTTGGT AGAATTGCTT CAACCTGGGA
CGCGGAGGTT GCAGTGAGCT GAGATTGTGC CATTGCACTC CAGCTTGGAT      57300
GACAGAGTGA GACCCTGTCT CAGGAAAAAA AAAAAAAAAC AAAAAAACC
TTGTTCTAAG CCAAAATCAA TCCCTTTAGC TGCCCAAATC ACACAGTTTA      57400
CAGATGGAGA AACAGTTTTA GAGAGGAAAA GGGACTTGCC CAAAGTCACC
CAGAGAATGG CAGAGCCTGA ACTAGCCTTC TGGACTTCTT GCCTCCAAAA      57500
GCTCTTTATA ATAAAATATA ATTTTAAATA AAAATAGTTA TCTGTTTAGG
GCCAAGCAAT ATGCTAAGTG CCGTCCAGCC ACTGTGTCAT TTACGTCTCC      57600
AAACAGCTCT AGTTGGGAGG CTCAATGATT ATCCCAATTT TACAGATAAG
GAAACAGGTC CAGAGAGGTT GAGGATTAGC CTAGAACCAC ACAGCTAGGA      57700
AATCCTGGAG CCAGGATTTG AACCCGGGTC TGACCTAAGA GCTCCCAGCC
GCCGTGATAT ATCAGCTTAT GTCATCCTGA CACCTACGCA GATGTCGGCT      57800
CGAATCCACT TTGCCTGAGC ATTGTCTCAG AGAAATCTAA TTTAAAAATT
AGGCAGCAAA TAGAAAATAT ATTTGACTGC TAGAGATGCA ATGGGACTGG      57900
GAGCCCAACA AAGGATCTTA GGCAAAGAA ATCCAAGTTG TTGGCCTCAG
CAACTATTAC TGAACTGGCT GGGCTTTGGG AAGCTACAGA GGGATGAGAA      58000
GACCTGGTGG ATCAGGTGGG CCCAACTCAG GCTGGCCCCC ACCCTGCAGG
AAGTAGGAAA AGTCCAGGGT CATAGGCCCA GTGAGATGCC GGCTGCGGGA      58100
GTTTCAGCCT CCGGGGCTGG ACCAGAGGGC AGGAGGGGAC GCCCCTGGGT
AGCAGCGCCA GAGTGGGCTG AGTGGCCTGG GCCCTGCGG GGGAGCTTTC      58200
AGAGATGTTG ATTTGGGGGT ACTCCCTCAG CCCTGCCTTT ACACAGAATT
TGTGGGGGAT GAGGGGAGGG GGAAAGGGGG GAGGAAGGCA GTGAGTGCAT      58300
CTGAATTTTT TTTTTTTTTT TACAAAAAGT GGCTTATTGC ATTTTTCTGA
TTACTCTATC AGCACGTGCA GACCTTTTCC TATTCAGAGA AAGCCTGAAG      58400
ATATAAAGAG GAAAGTGAAG AAAAACCACC GGAAATCCCA TCCCCGCCCC
AGCATCTGGC ACTGTGTGGG CGATCACGAA ATGAGCGCTT GTTTTTGAAG      58500
GCGTAGTATC TCCGTGAACA TCCGGTTGAA CAACCTTTCT GACTTTATTT
TTCCCACGAA AGTTATTAAT TAAAAACAA AAAGCAAAC ACCGAAAAAA      58600
CAAAAACCC AGCAAGTGTT TGAGCTCCCA CCACGAGGGA GGCCTGACGT
CACTGGATCC TCCCGGCAGC CGATGAGGCT GCATGGACT              58690
```

<p style="text-align:center">FIGURE 1L</p>

POLYMORPHISMS IN THE CODING SEQUENCE OF IL4Rα

```
ATGGGGTGGC TTTGCTCTGG GCTCCTGTTC CCTGTGAGCT GCCTGGTCCT
GCTGCAGGTG GCAAGCTCTG GGAACATGAA GGTCTTGCAG GAGCCCACCT    100
GCGTCTCCGA CTACATGAGC ATCTCTACTT GCGAGTGGAA GATGAATGGT
CCCACCAATT GCAGCACCGA GCTCCGCCTG TTGTACCAGC TGGTTTTTCT    200
GCTCTCCGAA GCCCACACGT GTATCCCTGA GAACAACGGA GGCGCGGGGT
                           G                 T         A
GCGTGTGCCA CCTGCTCATG GATGACGTGG TCAGTGCGGA TAACTATACA    300
                                                   C
CTGGACCTGT GGGCTGGGCA GCAGCTGCTG TGGAAGGGCT CCTTCAAGCC
CAGCGAGCAT GTGAAACCCA GGGCCCCAGG AAACCTGACA GTTCACACCA    400
ATGTCTCCGA CACTCTGCTG CTGACCTGGA GCAACCCGTA TCCCCCTGAC
AATTACCTGT ATAATCATCT CACCTATGCA GTCAACATTT GGAGTGAAAA    500
CGACCCGGCA GATTTCAGAA TCTATAACGT GACCTACCTA GAACCCTCCC
T
TCCGCATCGC AGCCAGCACC CTGAAGTCTG GGATTTCCTA CAGGGCACGG    600
  A
GTGAGGGCCT GGGCTCAGTG CTATAACACC ACCTGGAGTG AGTGGAGCCC
CAGCACCAAG TGGCACAACT CCTACAGGGA GCCCTTCGAG CAGCACCTCC    700
TGCTGGGCGT CAGCGTTTCC TGCATTGTCA TCCTGGCCGT CTGCCTGTTG
TGCTATGTCA GCATCACCAA GATTAAGAAA GAATGGTGGG ATCAGATTCC    800
CAACCCAGCC CGCAGCCGCC TCGTGGCTAT AATAATCCAG GATGCTCAGG
GGTCACAGTG GGAGAAGCGG TCCCGAGGCC AGGAACCAGC CAAGTGCCCA    900
CACTGGAAGA ATTGTCTTAC CAAGCTCTTG CCCTGTTTTC TGGAGCACAA
                                         C
CATGAAAAGG GATGAAGATC CTCACAAGGC TGCCAAAGAG ATGCCTTTCC   1000
AGGGCTCTGG AAAATCAGCA TGGTGCCCAG TGGAGATCAG CAAGACAGTC
CTCTGGCCAG AGAGCATCAG CGTGGTGCGA TGTGTGGAGT TGTTTGAGGC   1100
CCCGGTGGAG TGTGAGGAGG AGGAGGAGGT AGAGGAAGAA AAAGGGAGCT
TCTGTGCATC GCCTGAGAGC AGCAGGGATG ACTTCCAGGA GGGAAGGGAG   1200
                                                    C
GGCATTGTGG CCCGGCTAAC AGAGAGCCTG TTCCTGGACC TGCTCGGAGA
                                             T
GGAGAATGGG GGCTTTTGCC AGCAGGACAT GGGGGAGTCA TGCCTTCTTC   1300
                                            C T        C
CACCTTCGGG AAGTACGAGT GCTCACATGC CCTGGGATGA GTTCCCAAGT
GCAGGGCCCA AGGAGGCACC TCCCTGGGGC AAGGAGCAGC CTCTCCACCT   1400
GGAGCCAAGT CCTCCTGCCA GCCCGACCCA GAGTCCAGAC AACCTGACTT
GCACAGAGAC GCCCCTCGTC ATCGCAGGCA ACCCTGCTTA CCGCAGCTTC   1500
AGCAACTCCC TGAGCCAGTC ACCGTGTCCC AGAGAGCTGG GTCCAGACCC
         C
ACTGCTGGCC AGACACCTGG AGGAAGTAGA ACCCGAGATG CCCTGTGTCC   1600
CCCAGCTCTC TGAGCCAACC ACTGTGCCCC AACCTGAGCC AGAAACCTGG
GAGCAGATCC TCCGCCGAAA TGTCCTCCAG CATGGGGCAG CTGCAGCCCC   1700
CGTCTCGGCC CCCACCAGTG GCTATCAGGA GTTTGTACAT GCGGTGGAGC
T                          G         A
AGGGTGGCAC CCAGGCCAGT GCGGTGGTGG GCTTGGGTCC CCCAGGAGAG   1800
GCTGGTTACA AGGCCTTCTC AAGCCTGCTT GCCAGCAGTG CTGTGTCCCC
AGAGAAATGT GGGTTTGGGG CTAGCAGTGG GGAAGAGGGG TATAAGCCTT   1900
TCCAAGACCT CATTCCTGGC TGCCCTGGGG ACCCTGCCCC AGTCCCTGTC
CCCTTGTTCA CCTTTGGACT GGACAGGGAG CCACCTCGCA GTCCGCAGAG   2000
```

FIGURE 2A

```
CTCACATCTC CCAAGCAGCT CCCCAGAGCA CCTGGGTCTG GAGCCGGGGG
                          T
AAAAGGTAGA GGACATGCCA AAGCCCCCAC TTCCCCAGGA GCAGGCCACA        2100
GACCCCCTTG TGGACAGCCT GGGCAGTGGC ATTGTCTACT CAGCCCTTAC
CTGCCACCTG TGCGGCCACC TGAAACAGTG TCATGGCCAG GAGGATGGTG        2200
GCCAGACCCC TGTCATGGCC AGTCCTTGCT GTGGCTGCTG CTGTGGAGAC
AGGTCCTCGC CCCCTACAAC CCCCCTGAGG GCCCCAGACC CCTCTCCAGG        2300
   G
TGGGGTTCCA CTGGAGGCCA GTCTGTGTCC GGCCTCCCTG GCACCCTCGG
GCATCTCAGA GAAGAGTAAA TCCTCATCAT CCTTCCATCC TGCCCCTGGC        2400
                                              C
AATGCTCAGA GCTCAAGCCA GACCCCCAAA ATCGTGAACT TTGTCTCCGT
GGGACCCACA TACATGAGGG TCTCTT                                  2476
```

FIGURE 2B

ISOFORMS OF THE IL4Rα PROTEIN

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MGWLCSGLLF PVSCLVLLQV ASSGNMKVLQ EPTCVSDYMS ISTCEWKMNG
PTNCSTELRL LYQLVFLLSE AHTCIPENNG GAGCVCHLLM DDVVSADNYT      100
                      V          T
LDLWAGQQLL WKGSFKPSEH VKPRAPGNLT VHTNVSDTLL LTWSNPYPPD
NYLYNHLTYA VNIWSENDPA DFRIYNVTYL EPSLRIAAST LKSGISYRAR      200
                                        H
VRAWAQCYNT TWSEWSPSTK WHNSYREPFE QHLLLGVSVS CIVILAVCLL
CYVSITKIKK EWWDQIPNPA RSRLVAIIIQ DAQGSQWEKR SRGQEPAKCP      300
HWKNCLTKLL PCFLEHNMKR DEDPHKAAKE MPFQGSGKSA WCPVEISKTV
LWPESISVVR CVELFEAPVE CEEEEEVEEE KGSFCASPES SRDDFQEGRE      400
                                                    A
GIVARLTESL FLDLLGEENG GFCQQDMGES CLLPPSGSTS AHMPWDEFPS
                                 R
AGPKEAPPWG KEQPLHLEPS PPASPTQSPD NLTCTETPLV IAGNPAYRSF      500
SNSLSQSPCP RELGPDPLLA RHLEEVEPEM PCVPQLSEPT TVPQPEPETW
   P
EQILRRNVLQ HGAAAAPVSA PTSGYQEFVH AVEQGGTQAS AVVGLGPPGE      600
                         R   I
AGYKAFSSLL ASSAVSPEKC GFGASSGEEG YKPFQDLIPG CPGDPAPVPV
PLFTFGLDRE PPRSPQSSHL PSSSPEHLGL EPGEKVEDMP KPPLPQEQAT      700
                         S
DPLVDSLGSG IVYSALTCHL CGHLKQCHGQ EDGGQTPVMA SPCCGCCCGD
RSSPPTTPLR APDPSPGGVP LEASLCPASL APSGISEKSK SSSSFHPAPG      800
   A
NAQSSSQTPK IVNFVSVGPT YMRVS                                825
```

FIGURE 3